Title (en)

LNG cryogenic power generation system using molten carbonate fuel cells.

Title (de)

LNG cryogenes Stromerzeugungssystem, das Brennstoffzellen mit geschmolzenem Carbonat verwendet.

Title (fr)

LNG-système de puissance cryogénique utilisant de piles à combustible au carbonate fondu.

Publication

**EP 0467051 B1 19950426 (EN)**

Application

**EP 91108578 A 19910527**

Priority

JP 14039890 A 19900530

Abstract (en)

[origin: EP0467051A1] An LNG cryogenic power generation system using a molten carbonate fuel cell (1) is equipped with a CO2 separator (II). The CO2 separator (II) takes advantages of cryogenic LNG in a manner such that CO2 among gases discharged from an anode chamber (4) of the fuel cell (1) is liquefied with cryogenic LNG and separated from the anode exhaust gas. Cell reactions take place at a cathode chamber (3) and the anode chamber (4) of the fuel cell (1) to cause power generation as the oxidizing gas which contains CO2 is fed to the cathode chamber (3) and the fuel gas is fed to the anode chamber. LNG is reformed by a reformer of the fuel cell and (4) the reformed gas is fed to the anode chamber (4). During the cell reaction, CO2 of the oxidizing gas fed to the cathode chamber (3) is transferred as carbonate ion to the anode chamber (4) and CO2 is enriched or concentrated before expelled from the anode chamber (4). This anode gas is introduced to the CO2 separator (II). In the CO2 separator (II), CO2 among the anode gas is liquefied by cryogenic LNG and separated from the anode gas. As a result, the power generation and the CO2 recovery are carried out at the same time, and an amount of CO2 discharged to atmosphere is remarkably reduced. <IMAGE>

IPC 1-7

**H01M 8/04**; H01M 8/06; H01M 8/14

IPC 8 full level

**H01M 8/04** (2006.01); **H01M 8/00** (2006.01); **H01M 8/06** (2006.01)

CPC (source: EP US)

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Citation (examination)

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DOCDB simple family (application)

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